How the IoT is Enabling Safer Material Handling Operations

Presented by:
Dan Romary
VP, BI and Analytics,
I.D. Systems, Inc.
The IoT or “Internet of Things”

The **Internet of things** is the *internetworking* of physical devices, *vehicles* (also referred to as "connected devices" and "smart devices"), buildings, and other items—embedded with electronics, software, sensors, actuators, and network connectivity that *enable these objects to collect and exchange data*

The **interconnection** via the Internet of computing devices embedded in everyday objects, enabling them to *send and receive data*
Lift Truck Safety Statistics

- 100,000 forklift accidents every year
- 11 percent of all forklifts are involved in accidents each year
- 100 – the approximate number of fatalities from forklift accidents every year, in the U.S. alone

(Source: U.S. Department of Labor)
“If it can’t be measured, it can’t be managed”

• Vehicle Management Systems (VMS) are IoT technology enabled systems that provide:
  – Networked connection and communication with lift trucks, allowing collection and analysis of operational vehicle / fleet data
• With VMS, enterprises can:
  – Accurately measure lift truck safety compliance
  – Control user access to lift trucks
  – Take appropriate action to correct safety issues
  – Identify unsafe drivers
  – Reduce safety incidents
Primary Safety Benefits of VMS

• Prevent unauthorized access to vehicles
• Ensure only trained drivers operate trucks
• Monitor and reduce impacts
• Reduce anonymous damage
• Enforce pre-shift safety checklists
• Lock-out equipment with safety issues
• Reduce speeding and unsafe driving behaviors
Vehicle Access Control

- Restrict access to ensure only trained, authorized users can operate vehicles
- Lock-outs, group authorization, shift / scheduling control
- Driver training certification reporting

Electronic Safety Checklists

- Enforce compliance and eliminate paper checklists
- Ensure trucks are safe to drive
- Automatic notifications to maintenance personnel of unsafe vehicles
Impact Management

• Identify unsafe drivers
  • No more anonymous damage to facility and product!

• Auto-learning sensor monitors impacts
  • Automatic truck shutdown for severe impacts
  • Visual and audible alerts as impacts occur

• Require safety checklist completion after impacts
• Email / Text Message Notifications to Managers and Maintenance Personnel
Safety and Analytics

Analytics reporting allows managers to see and stay on top of safety violations, unsafe driving, and unsafe vehicles

• See which drivers are most hazardous to your operation
• Identify critical safety and vehicle issues
• Monitor compliance with safety standards
• Compare performance across sites and the enterprise
Impacts Dashboard

Analyze Impacts by Site, Severity, Operator, Vehicle
Impacts Dashboard

Drill thru by Operator or Site to analyze Impacts details
Compliance Dashboard

Analyze Non-Compliance Events by Site

Weekly growth trend of Checklist issues and Non-Compliance Lockouts
Compliance Dashboard

Drill to detail by Site or Operator
In Conclusion

• Vehicle Management Systems are a global best practice for improving lift truck safety

• VMS technology has been adopted by over half of Fortune 200 companies with lift truck operations

• Critical risk management tool for global enterprises concerned with employee safety and financial risk of hazardous operating conditions
For More Information:

Speaker email: DRomary@id-systems.com
Website: www.id-systems.com

Or visit ProMat Booth S-454